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Refugee special economic zones

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Abstract

Purpose – The purpose of this paper is to show how special economic zones (SEZs) can be applied to refugee camps. Zones are powerful tools for investors to act like institutional entrepreneurs, who promote institutional reform by pursuing exemptions from government constraints and taxes or by advocating for reform. Refugee SEZs (R-SEZs) would similarly allow for institutional entrepreneurs to promote broader immigration reform.
Design/methodology/approach – The authors apply a political economy framework to R-SEZs that explores the factors that make them feasible. A mathematical model is applied to explicitly define the conditions under which the zones could succeed in benefiting refugees, investors and the host economy alike.
Findings – Under certain conditions, appropriate tax rates can be applied to R-SEZs that make them feasible. Feasibility is determined by being beneficial for the host country while also attracting investors. The zones are feasible if they attract enough foreign investors as opposed to domestic investors. Other factors contributing to zone success are higher wages outside the zone, lower wages inside it, higher cost to the government of non-employed refugees, lower relocation cost for businesses and a higher tax rate outside the zone.
Practical implications – This policy would aim to provide job opportunities to refugees, profit opportunities to investors and lower net costs for the host government. R-SEZs should be considered by policy makers in countries hosting refugee camps. Just like the old model of SEZs, they can benefit workers while also enhancing the government's budget.
Social implications – R-SEZs have the potential to alleviate the refugee crisis the world is facing, which is arguably one of the largest social challenges of our time.
Originality/value – This paper is the first to outline the political economy conditions for SEZs applied to refugee camps.

Keywords Refugees, Special economic zones, Refugee camps, Integration

Paper type Research paper

1. Introduction

Special economic zones (SEZs) have attracted investors, increased exports and provided employment opportunities in numerous countries where they have been introduced. While these sorts of benefits of SEZs are commonly cited as justifications for the policy, they cannot explain why SEZs are ever better than more general reforms.

SEZs can be superior to general reforms when they help bring about institutional and political changes that would otherwise meet with too much political resistance. This happens if the zones are used as tools for general reforms through a gradual process (Moberg, 2017, ch. 3). For this to happen, zone investors must act as institutional entrepreneurs, by obtaining fiscal and regulatory exemptions and advocating for liberalization (Li *et al.*, 2006).

We apply these insights to one of the most contentious political areas, that of refugee and immigration policy. We argue that SEZs can be combined with refugee camps to provide opportunities for investors, refugees and governments alike, and eventually lead to wider immigration policy reforms.

The next section makes the case for SEZs as tools for institutional entrepreneurs. Section 3 describes how SEZs may be applied to refugee camps. Section 4 discusses refugees' access to large-scale commercial production and trade. Section 5 explains how refugee SEZs (R-SEZs) can be made attractive for investors as well as for host governments. In Section 6, a formal model illustrates the trade-offs that R-SEZs imply and shows the existence of a Pareto-improving solution. Section 7 discusses how R-SEZs can ultimately be a way toward refugee integration, and Section 8 concludes.

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2. The case for SEZs

SEZs can create enclaves of growth in otherwise uncompetitive and protected economies, by offering businesses exemptions from taxes, tariff and regulations. One of the first modern zones came about at the Shannon Airport in 1959 (Callanan, 1999), but the concept only became popular internationally with the growth of the SEZs in China in the 1980s. Since then, several Latin American countries have grown their textile manufacturing industries on the back of SEZs, and the zones have played an important role in the transformation of the "Asian Tigers" (Amirahmadi and Wu, 1995).

Today, people around the world earn their livelihood thanks to zone policies, which attract investors to predominantly labor-rich countries. However, SEZs are also criticized for being a second-best solution to more general reforms (World Bank, 1992, p. 1). If governments know what policies would encourage economic development, it is argued, they have no reason to confine their reforms to secluded areas.

There is, however, one way in which SEZs can benefit an economy. Entrepreneurs can use SEZs to obtain policy exemptions when such changes are not obtainable more broadly. SEZs make local policy changes possible as they introduce a level of decentralization that allows for more radical reforms. These local reforms enhance the productivity of a cluster of companies, which in turn creates jobs and in other ways benefits the economy as a whole. This contrasts with a company that obtains tax exemptions for itself only, an arrangement that is more akin to rent-seeking.

Investors pursuing SEZs thus take on the role of the institutional entrepreneur. In their pursuit of profits, they improve the prevailing institutional climate, thus bringing about economic development to the benefits of the broader economy (Li *et al.*, 2006). SEZ investors function as evasive institutional entrepreneurs, in that they avoid being impacted by the prevailing institutional climate. Such evasion can have broader impact beyond the productivity of the investor itself. As Henrekson and Sanandaji (2011) argue, "As evasion spreads, regulations lose some of their bite, and may in time be abolished if not modified to deal with evasion attempts." Even if the act of evasion is not productive in itself, therefore, it can be "a second-best productive response to suboptimal institutions" (Douhan and Henrekson, 2008).

SEZs have the powerful feature of spreading liberalization by altering the incentives of local policy makers and businesses. As one SEZ is introduced, this induces more businesses to lobby for the policy elsewhere and gives local policy makers the insight and opportunity to benefit from SEZs in their own jurisdictions (Moberg, 2017, ch. 3).

China exemplifies how institutional entrepreneurs can utilize SEZs and generate wider reforms. Their zones came about in 1978, when a group of businessmen with interest in Hong Kong managed to obtain the first zone just across the water on the Chinese mainland (Crane, 1990, pp. 26, 156). Requests for more SEZs soon followed, as local businessmen and politicians sought to benefit from zone policies. As Krug and Hendrischke (2008) explains, townships, counties and even provinces engaged in an "institutional competition" by offering various incentives. The SEZs were an important tool in this regard. The share of municipalities with SEZs increased from 24 percent in 1990 to 92 percent in 2008 (Wang, 2013).

The Chinese SEZs were tools for institutional entrepreneurs to obtain exemptions that would not have been available to them in any other way. The Chinese example also illustrates how SEZs enhance the role of institutional entrepreneurs to promote the spread of the policies that they pursue.

3. SEZs applied to refugee camps

Refugee and immigration integration is one of the most contentious policy issues of our time and there is often much resistance to refugee integration. However, just like China's SEZs brought about a gradual process of economic liberalization, R-SEZs can allow for policy exemptions that gradually reform immigration policies by promoting refugee integration.

R-SEZs would be located adjacent to refugee camps. The zones would allow refugees to work and provide fiscal benefits to investors. SEZ investors would function as institutional entrepreneurs by demanding exemptions to let them hire refugees, along with fiscal incentives. As refugees become self-sufficient, these exemptions could spread to the host country more broadly. The rest of this paper will look at how these zones would work, how they could be feasible and how they can promote broader reform.

There are numerous locations in the world where the R-SEZ concept could be applied. The world has over 25m refugees, and another 40m internally displaced people, which are refugees within their countries' borders. At least six million of the world's displaced reside in camps (UNHCR, 2018, pp. 2, 60).

While refugee camps are supposed to be temporary solutions for people fleeing a conflict, they commonly serve as the home of refugees for years, decades and even generations. Globally, the average time in exile for a refugee is 20 years (Asylum Access, 2014, p. 43). The world's largest refugee complex of Dadaab, Kenya, hosts 10,000 third-generation camp residents (UNCHR, 2013, p. 34). Ever more drawn-out conflicts are making temporary refugee camps increasingly permanent (Rogge, 1985, p. 96; Bookman, 2002, p. 18).

Although international law guarantees refugees the right to seek work (Asylum Access, 2014, pp. 11-13), these rules are often ignored, with governments instead preventing refugees from working. This leaves a large number of refugees and displaced people with limited or no opportunities to work, save and invest. Such policies impoverish refugees and waste an abundance of human capital and entrepreneurial talent.

Studies on the economics of migration suggest that allowing refugees to work can create winners without creating losers. Furthermore, an increase in the labor force due to immigration has either no or only small effects on the wages of either long-term residents or other recent immigrants (see e.g. Card, 1990; Friedberg, 2001; Ottaviano and Peri, 2007). Allowing for refugees to work can therefore benefit both the refugees and the people of their host economy.

Nevertheless, people in refugee host countries generally oppose policies that would seem to welcoming to refugees. Hence, the benefit of R-SEZ would introduce such exemptions in confined areas that people would perceive as less threatening and hence would be less likely to resist.

4. Refugees' access to economies of scale

Today, refugees are often prohibited from working or confined to small markets for their trade and production. R-SEZs would therefore be a significant policy improvement from the situation today, by bringing refugees into the formal economy. This section gives a brief overview of refugees' access to large-scale production and trade.

Camp refugees often face legal restrictions on their ability to work and earn a living. Some countries place practical obstacles in the way while others ban refugees from working altogether (Bookman, 2002, p. 135; Asylum Access, 2014). Thailand, for instance, hosts many Burmese refugees, who they do not allow to work. Refugees in breach of the ban become illegal migrants, making them subject to deportation if caught (Brees, 2008, p. 381). Greek policies similarly make it hard to obtain the license to self-employment. Malaysian law does not even recognize refugees, instead referring to them as "illegal migrants" with no right to work (Asylum Access, 2014, pp. 27, 28, 31).

In places where refugees may work, their economic integration is commonly restricted to the camp. For smaller camps, the limited size of their internal markets inevitably constrains the usefulness of production and exchange within the camp. Refugee camps also have the disadvantage of a suboptimal combination of skills, since, while cities can attract people on the basis of job opportunities, refugee camps invite their residents on the basis of desperation.

The most basic way for refugees to ensure their food supply is often farming, which in many cases is virtually impossible as host governments tend to use some of the country's least fertile land as refugee camps. One reason for this is allegedly to avoid stirring resentment toward refugees among country citizens who may perceive refugees as infringing on the country's precious arable farmland (Rogge, 1981, p. 203; Werker, 2007, p. 472).

Refugee camps are more likely to prosper by trading with the broader community, an activity often restricted by host governments (Bookman, 2002, p. 134). When given the chance to trade with the local community, camp refugees commonly get by with farming or trading (Betts *et al.*, 2014, pp. 10, 27; Brees, 2008, p. 390). Others engage in small-scale services, convenience stores or pharmacies (Bookman, 2002, p. 96).

Many refugees contribute to the economies of their neighboring communities. The Dadaab refugee complex in Kenya, with over 260,000 inhabitants, has become a center of trade and economic activity. The camp attracts people from neighboring towns who come to shop, trade and work (Montclos and Kagwanja, 2000; UNHCR, 2017).

While refugee camps can contribute to economic development in these ways, they are still unable to pursue larger economies of scale that would actually make their ventures competitive. Compared to people outside the camps, they often have limited access to market information such as market prices and demand for the goods they sell. Lack of information makes it hard to know what to bring to the local market and when to bring it (Werker, 2007, pp. 467-468). Refugees would be better off producing on a larger scale and selling to the national or even international market (Brees, 2008, p. 391). This would be the great benefit of R-SEZs.

Camp refugees seldom enjoy wider market reach, although there are a few examples of how this can work. In Kyangwali in Uganda, a refugee started a sorghum factory, selling to a Ugandan beverage company that makes beer (Omata and Kaplan, 2013, p. 17). The Dadaab refugee complex in Kenya hosts a company employing refugees to do "micro-work" tasks on computers for Silicon Valley firms (Betts *et al.*, 2014, p. 9).

Thailand is actually doing something reminiscent of R-SEZs along its borders with various neighboring countries. The zones are meant to reduce regional disparities, increase production, deal with labor shortages and minimize the impact of illegal immigrant-workers. The plan is to allow immigrants to cross the country border daily to work in the border-based zones. Such a scheme should provide the immigrants with legal work opportunities while investors in the zones can access the abundant immigrant labor (Dannecker and Schaffar, 2016; Krainara, 2016, pp. 6, 33, 111; Mellor, 2015; Ngamkham, 2015).

Alas, these are not overwhelming examples of refugees engaging in large-scale production and international commerce. R-SEZs would thus be a break with the past.

5. How would R-SEZs work?

R-SEZs would introduce reforms of refugee policies in confined areas. Similar to traditional SEZs, R-SEZs would provide entrepreneurs with an attractive business climate that would not be pursued in the economy as a whole due to political resistance.

While most SEZs focus on manufacturing, an R-SEZ could host all kinds of economic activities, depending on available resources, worker skills and possible markets. By connecting an R-SEZ to a refugee camp, the skills and experience or refugees can be harnessed to provide refugees themselves with better opportunities while developing an underdeveloped part of the host country.

Refugees can either work for zone investors or pursue their own entrepreneurial ventures. The zone model should greatly enhance the opportunities of refugees to do business. Where refugees are allowed to operate businesses, they tend to endure higher administrative costs and more bureaucracy than others (De la Chaux and Haugh, 2014, p. 15). With R-SEZs, they could enjoy more efficient administration and less bureaucracy.

To encourage zone investment, the host government can set up so-called one-stop-shops, alleviating investors from the burden of going through multiple bureaucracies to set up and run their businesses.

R-SEZs would also alleviate the lack of information that places refugees at a disadvantage to local traders. Refugees working for foreign investors would have no need to access market information about the goods they produce, with such knowledge being handled by the company. For refugees running their own businesses, the one-stop-shop can provide information about potential service providers, input suppliers and consumption patterns.

The legal framework of an R-SEZ legal framework would seek to meet the deficiencies of the prevailing business climate. If a major barrier to investment is the bureaucracy of starting a business, an R-SEZ can offer investors an easier bureaucratic process of starting a business. If burdensome regulations cause a lack of investments, the R-SEZs should preferably offer regulatory exemptions. On top of this should come fiscal incentives such as tax and tariff exemptions. The idea is to make the incentives attractive enough that investors will prefer the R-SEZ above other SEZs in other countries.

A key regulatory exemption of R-SEZs will be giving refugees the formal right to work. A zone must also be accessible for camp refugees, perhaps as an integral part of the camp. The legal framework of an R-SEZ might therefore cover both the residential area of the refugee camp and a designated area adjacent to it where external investors may locate. One option is to designate an existing industrial area or community as part of an R-SEZ where refugees can work[1].

An R-SEZ developer should be a private company that rents or buys the land from the host government. Private zone development is a way to prevent the government from spending money on zone infrastructure and from using the zone for rent-seeking (Moberg, 2015). Private zones are also less likely to meet popular resistance. If the host government funds the project, the country's citizens may decry the competition for public resources.

A private developer would choose the combination of infrastructure and services that best attracts investors. Many private zones and industrial parks have large electricity generators, wastewater treatment facilities, garbage collection, water supply and even fire departments (FIAS, 2008). Zone developers also have the incentive to care for the health and education of their employees, to keep them healthy and productive. Some private and non-profit zones in the Dominican Republic have their own health clinics, for instance. The better the services, the higher the rent a zone developer can charge from investors. An R-SEZ should be large enough to provide the necessary scale and to exploit synergies and internalize positive externalities of any investments with public good characteristics.

A prosperous camp will require financial institutions that allow refugees to save and invest. Much of the discussion about finance in refugee camps concerns access to credit to finance refugee business ventures. However, micro-lending seems to work best for refugees in need of smaller amounts of capital. In an R-SEZ, focus should rather be on reliable depository institutions that refugees can trust to handle their savings. These may be commercial banks or mobile-phone-based money transfer systems such as Jiring in Iran or M-Pesa, which is adopted in several countries in Africa and Eastern Europe. Experience from developing countries shows that people often trust these systems more than banks and find them more convenient (Jack and Suri, 2011).

6. Are R-SEZs incentive-compatible?

For R-SEZs to have an impact, they must succeed in attracting investors. At the same time, any fiscal incentives cannot be perceived as a giveaway to foreign capitalists at the expense of the people of the host country.

This section will show that R-SEZs can indeed be beneficial for investors and host governments and people alike. Because they also provide opportunities for refugees, the zones can benefit all parties involved. We start by discussing the benefits of investors and how governments would benefit. We then formally model the costs, benefits and trade-offs involved to make a zone Pareto improving.

6.1 If you build it, will investors come?

An R-SEZ should offer both fiscal and regulatory exemptions, as well as shorter and cheaper bureaucratic process for starting a business. But why would investors locate by a refugee camp when these benefits are similar to already-existing traditional SEZs? The answer will depend on the particular costs and benefits to a company invested in a refugee camp.

One strong appeal of R-SEZs would be reduced labor costs (Bookman, 2002, pp. 124-125). Another benefit of investing in an R-SEZ is to lower the cost of crime, as workers live close by and do not need to travel long distances to work. In countries with high crime rates, employees being hurt or robbed on their way to work in SEZs is a costly risk that investors have to take into account as they train and employ their workers. Workers disappear, are injured or simply do not show up to work if the journey seems not worth the risk. Finally, refugees offer skills that may not be accessible in the host country, at least not in the same abundance and at the same cost.

Investors may be reluctant to rely on a refugee camp because of its supposed temporary nature. However, as previously mentioned, camps sometimes last for generations. The risk of a worker leaving a refugee camp can nevertheless be overcome in two ways. First, many investors may offer simpler work that requires limited training, which is the traditional model of manufacturing SEZs that often relies on apparel production. Second, investors may take advantage of established skills among refugees. In contrast to economic migrants, many refugees have left behind them a career based on their education and job experience. They will want to maintain their skills as camp residents.

The worry that a refugee camp will disappear altogether might have potential investors making smaller capital investments to start their production. Light assembly, such as electronics, is therefore one possible kind of activity. The risk of a camp disappearing should also prompt the government to allow investors to hire some amount of people from the host country to ensure that much of their workforce will remain if the refugees disappear.

6.2 What is in it for the people of the host economy?

The biggest risk to R-SEZs is that they will either fail or be perceived as failing to benefit the people of the host country. We will assume that policy makers have the incentive to respond to the pressure of the people, so that the government will not pursue a zone that does not benefit the citizens.

Zones are not necessarily beneficial for the host country just because they attract investors. Governments often have the incentive to promise generous tax benefits and spend money on zone infrastructure to attract investors. Such methods often result in high fiscal costs exceeding the benefits of an SEZ, even if it looks to the public like a successful project (Moberg, 2017).

With R-SEZ, things are even more complicated. The people enjoying the job creation and other opportunities from the zone are largely not the same people financing the tax cuts and infrastructure that attract investors. The host country's residents will therefore not take the proposition that the zones are beneficial as job creator at face value. They are likely to denounce an R-SEZ that benefits refugees at the host country's expense.

Despite tax benefits, an R-SEZ can benefit the host country in a variety of ways. Hiring local workers is one way. Also, investors will presumably pay some tax to the government. This will not be a gain when it comes to domestic companies, from which the government will receive less in taxes than it otherwise would have from them. However, foreign investors, who otherwise would pay no taxes on the country, provide a potential fiscal gain. Increasing foreign investment also benefits other companies in the country, by transferring technology to less sophisticated domestic firms (Farole and Winkler, 2014). Foreign investments might also help a host country surrounded by conflict to enhance its reputation and attract more investors.

Refugees empowered to supply for themselves should also be cheaper to support for the government. Although many refugees receive financial aid from the international community, host governments inevitably incur costs when hosting camp refugees, which would be lower if the refugees could support themselves[2]. This cut in government spending should also help make the case to the public of the benefits of R-SEZs.

6.3 How do refugees benefit?

Refugees should not lose any of their existing rights and options with the introduction of an R-SEZ. The zones provide an opportunity to work, but not an obligation to do so. R-SEZs can thus only add to the circumstances of refugees. When refugees can save money and raise their standard of living, they can enjoy not being dependent on donor handouts.

6.4 Modeling the trade-off

In what follows, we will assume that the population of a host government will not support the creation of an R-SEZ out of benevolence, despite the strong humanitarian case for the zones. The people will favor the policy only if they can see how they benefit from the zones. Without popular support, the government will not introduce an R-SEZ.

If the government foregoes tax revenues, people will see the project as a scheme of unwarranted welfare support to strangers. We must therefore show that a government can set a tax rate for R-SEZ investors that both benefits the government and attracts businesses to the zone. Because the loss in tax revenues will be very different between companies already in the country and those that enter thanks to the zone, we will take that distinction into account in the model.

We start by considering the firm's profit function:

$$\pi = (1-t)(py(x)-w \times x),$$

where t is the tax on profit and p is the world price of their good. y is output, which is a function only of labor input, x, such that $y(x) = x^{\alpha}$, with $\alpha \leqslant 1$. Workers' wages are denoted by w. Firms may be either international or domestic. For simplicity, we will assume that they face the same costs regardless of where they are originally located. Firms face the choice of keeping the production at the current location or relocating to the R-SEZ. If they remain, they face these profits:

$$\pi_1 = (1-t_1)(px^{\alpha}-w_1x_1).$$

We use the subscripts in t_1, w_1 and x_1 to denote the tax rate, wages and number of workers, respectively, outside R-SEZs. Maximizing profits with respect to labor gives the optimal number of workers:

$$\mathrm{FOC}(x) : (1-t_1)\left(p\alpha x_1^{\alpha-1}-w_1\right) = 0$$

$$= > x_1^* = \left(\frac{p\alpha}{w_1}\right)^{1/1-\alpha}.$$

This gives a profit of:

$$\pi_1^* = (1-t_1)\left(\frac{1}{w_1}\right)^{\alpha/1-\alpha} \times \delta,$$

$$\delta = p^{1/1-\alpha}\left(\alpha^{\alpha/1-\alpha} - \alpha^{1/1-\alpha}\right).$$

Profits for the firm in an R-SEZ look similar[3]:

$$\pi_2 = (1-t_2)(px^\alpha - w_2x_2) - rc,$$

here t_2, w_2 and x_2 are the tax rate, wages and workers, respectively, in an R-SEZ, and rc is the relocation cost. This is the cost to a firm from making the move into the zone, including the cost of adapting to the new environment. For simplicity, we assume that this cost is independent of profit and the same in each period, even though it may realistically decline over time. Maximizing profits with respect to workers yields:

$$\text{FOC}(x) : (1-t_2)\left(p\alpha x^{\alpha-1} - w_2\right) = 0$$

$$\Rightarrow x_2^* = \left(\frac{p\alpha}{w_2}\right)^{1/1-\alpha}.$$

With the resulting profits:

$$\pi_2^* = (1-t_2)\left(\frac{1}{w_2}\right)^{\alpha/1-\alpha} \times \delta - rc.$$

With δ being defined as previously. Firms would want to locate if profits are higher in the R-SEZ:

$$(1-t_2)\left(\frac{1}{w_2}\right)^{\alpha/1-\alpha} \times \delta - rc > (1-t_1)\left(\frac{1}{w_1}\right)^{\alpha/1-\alpha} \times \delta.$$

Rearranging, we get the following restriction on the R-SEZ tax rate:

$$t_2 < 1-(1-t_1)\left(\frac{w_2}{w_1}\right)^{\alpha/1-\alpha} - rc/\delta \times {w_2}^{\alpha/1-\alpha}.$$

The government is freer to increase the R-SEZ tax if wages and taxes are higher in current investment locations, if wages are low in the R-SEZ, if the relocation cost is low and if the price of the produced good is high. As the government taxes profits, it enjoys the following revenue from taxing domestic and R-SEZ companies, respectively:

$$R_1 = t_1\left(\frac{1}{w_1}\right)^{\alpha/1-\alpha} \times \delta.$$

$$R_2 = t_2\left(\frac{1}{w_2}\right)^{\alpha/1-\alpha} \times \delta.$$

The government also faces a cost for each camp refugee it must provide with food and housing, which we will denote by $ref\,c_1$. This cost decreases by the number of people employed in an R-SEZ. By normalizing the number of refugees to one, we can denote the cost of hosting refugees for a country with an R-SEZ, thus:

$$refc_2 = refc_1(1-x_2^*) = refc_1\left(1-\left(\frac{p\alpha}{w_2}\right)^{1/1-\alpha}\right).$$

It will be profitable for the government to introduce an R-SEZ if net zone benefits are larger than the net benefit from taxes and refugee costs in the absence of an R-SEZ, which is reflected in the condition below. Whether it holds will depend to a large extent on the share of zone investors that are domestic companies and, thus, impose a tax loss for the government by moving to the R-SEZ. Below, γ is the share of zone investors that are domestic companies relocating to the R-SEZ:

$$t_1\left(\frac{1}{w_1}\right)^{\alpha/1-\alpha} \times \delta \times \gamma - refc_1 < t_2\left(\frac{1}{w_2}\right)^{\alpha/1-\alpha} \times \delta - refc_1\left(1-\left(\frac{p\alpha}{w_2}\right)^{1/1-\alpha}\right).$$

We can rearrange this expression as follows:

$$t_2 > t_1\left(\frac{w_2}{w_1}\right)^{\alpha/1-\alpha} \times \gamma - \frac{refc_1}{w_2}\frac{\alpha}{1-\alpha}.$$

If all R-SEZ investors are foreign, $\gamma = 0$, any tax rate in the zone makes it profitable for the government. This is because no taxation revenue from domestic companies is lost due to the R-SEZ. If all investors are domestic, we can compare the government's revenue from a domestic firm with those from an R-SEZ firm. The tax rate for the zone must then be high enough to make the zone worthwhile for the government, and still low enough to attract investors. Imposing both the investor's and government's constraint on the tax rate, R-SEZs are feasible only if this condition holds:

$$1-(1-t_1)\left(\frac{w_2}{w_1}\right)^{\alpha/1-\alpha} - rc/\delta \times {w_2}^{\alpha/1-\alpha} > t_1\left(\frac{w_2}{w_1}\right)^{\alpha/1-\alpha} \times \gamma - \frac{refc_1}{w_2}\frac{\alpha}{1-\alpha}.$$

Rearranging, we solve this as a function of the share of domestic firms entering the R-SEZ[4]:

$$\gamma < \frac{{w_1}^{\alpha/1-\alpha} \times \left[\frac{refc_1 \times \alpha}{1-\alpha} \times \left(\frac{1}{w_2}\right)^{1/1-\alpha} - \frac{rc}{\delta} + \left(\frac{1}{w_2}\right)^{\alpha/1-\alpha}\right] - 1}{t_1} + 1.$$

An R-SEZ is always feasible if all investors are non-domestic. Failing that, the R-SEZ is more likely to be feasible with a higher wage outside the zone, lower wage inside it, a higher cost of non-employed refugees, a lower relocation cost and a higher tax rate outside the zone.

R-SEZs are thus feasible under the right combination of circumstances, which is the main point we want to demonstrate. R-SEZs will not be a workable proposition in all contexts. While always serving to provide more opportunities to refugees, they may be opposed by the people and thus not pursued by the government, or fail to be sufficiently attractive to investors. In some circumstances, no tax rate can be set to make all parties better off.

However, as long as a large enough share of businesses moving into an R-SEZ is non-domestic, the zone can benefit all parties involved[5]. In many cases, non-domestic firms will be more likely to relocate to zones than foreign multinationals. Domestic firms may be reluctant to operate in new environments, since they have less experience generally of moving and adapting to new locations than multinationals. This increases the likelihood of a larger share of foreign companies in an R-SEZ.

7. How R-SEZs lead to refugee integration

Truly successful R-SEZs would not merely bring about static improvements. As with traditional SEZs, refugee zones can function as tools for investors to act like institutional entrepreneurs and eventually generate changes beyond the zone borders.

The kind of exemptions provided by R-SEZs would likely be infeasible to introduce in the country as a whole due to public opposition. The public would see the refugee camp as temporary and not a reason to attract more immigrants through welcoming policies. Host countries rarely give refugees citizenship (Bookman, 2002, p. 36). However, with ongoing conflicts and virtually permanent camps, the best hope for many refugees of a future in freedom is to integrate into the host country.

Politicians have the incentive to keep refugees in camps to avoid losing popularity among the voting citizens. People often resent refugees on the same grounds that they oppose immigrants generally. Reasons for this include different ethnicity, culture, criminality and religion (Bookman, 2002, pp. 135, 138). Another argument against integrating refugees is that they "steal" jobs from low-skilled people and lower their wages (Rogge, 1981, p. 200; Bookman, 2002, pp. 126, 135). This perception of immigrants as disrupting the labor market persists despite studies showing that they have no or only limited impact on wages (Friedberg and Hunt, 1995; Card, 2005).

Another prevalent argument is that refugees cannot take care of themselves and therefore require government support. Even though refugees may be skilled, educated and willing to work, a misconstrued image of refugees as needing of support can drive politics against refugee integration. Even if politicians see the economic and social value of immigrants, they will avoid unpopular immigration reforms to maintain support by the voting public. Politicians therefore tend to keep refugees confined to camps.

R-SEZs may be small and non-intrusive enough to be accepted by the public. As such, they are a second-best solution to broader reforms. In the long run, though, they may be the only path to immigration reform. The zones would demonstrate that refugees can contribute to economic growth as productive member of the community.

Refugees who work in R-SEZs should eventually be able to move outside the zone to other parts of the host country while keeping their R-SEZ jobs. This would make them self-sufficient from day 1 as residents of the host country outside the camp. Since their wage-paying jobs also provide opportunities for saving, they could settle with a financial buffer. Their self-sufficient status could help change the perception of refugees as dependent on financial support. People's worries about the cost of integrating refugees might thus be refuted. Refugees will not need to live off welfare from their new government and will not immediately threaten to "steal" jobs.

This is a powerful example of how institutional entrepreneurs can seek exemptions, which in time leads to a broader dismembering of the restrictions they seek to avoid (Henrekson and Sanandaji, 2011). Eventually, the whole country may allow for refugees to work and reside freely in the country.

There are precedents in the past of countries welcoming refugees on the basis of self-sufficiency. For instance, when in 1974, the refugees of the Etsha settlement in Botswana became self-sufficient, the Botswanan Government offered them citizenship (Rogge, 1985, p. 74). In 1980, Tanzania similarly granted citizenships to tens of thousands of refugees mostly from Rwanda, after they had become self-sufficient (Rogge, 1985, p. 77). While this can evidently happen without R-SEZs, the zones would be a powerful tool to this effect.

8. Concluding remarks

The life in a refugee camp may be poor, nasty and brutish, but not as short as is often presumed. Refugees often stay for many years and even decades in refugee camps. As we have argued in this paper, R-SEZs could allow for refugees to make a living while benefiting the country hosting them. By helping refugees become self-sufficient, R-SEZ can also encourage the host country to adopt more refugee-friendly policies.

For R-SEZs to promote broader reforms, they rely on zone investors to act as institutional entrepreneurs. Such action can take different forms. We have concentrated on investors pursuing policy exemptions. As the public sees the benefit of one exemption, it can allow for more of them, which can eventually lead to institutional change (Li *et al.*, 2006). Investors can also be more active and advocate for change or in other ways try to persuade policy makers to pursue reforms. While this too would be a way for investors to increase their profits, their advocacy would have positive externalities benefiting the economy as a whole (Li *et al.*, 2006). As with SEZs in the past, R-SEZ investors would plausibly start by pursuing exemptions and engage in advocacy and persuasion later, as public opinion becomes more sympathetic to refugee integration.

Economically, R-SEZs are not the best solution to the situation of refugees living in camps. Greater improvements would be to immediately allow refugees to work, integrate and move freely within their host country. Politically, though, it may be the best available solution.

Notes

1. With production facilities outside the refugee camp, any raw material of production can enter from the host country while workers enter from the side of the refugee camp.
2. For instance, while the UNHCR may provide basic accommodations and daily rations, the government may want to raise living standards above that to prevent a human disaster on their soil and the threat to safety that may imply. Desperately poor refugees are also more likely to flee the camp and settle in the country illegally (Rogge, 1981, p. 202; Bookman, 2002, p. 98). Refugee welfare is also a matter of image toward the rest of the world. Refugees can be seen as a common problem that the international community shares. Every country thus has a responsibility and a duty toward other countries to make sure that its refugees enjoy a decent livelihood.
3. A mathematical appendix with derivations is available from the authors.
4. A mathematical appendix with a closer look at the government's trade-offs is available from the authors.
5. Going back to the previous inequality equation, the part divided by t_1 must only be larger than 0 for the share of domestic R-SEZ businesses to be irrelevant. Remember that γ is a share between 0 and 1, so that if the right-hand side of the equation is more than 1, the inequality becomes meaningless. This is true when:

$$1 < \frac{w_1^{\alpha/1-\alpha} \times \left[\frac{refc_1 \times \alpha}{1-\alpha} \times \left(\frac{1}{w_2}\right)^{1/1-\alpha} - \frac{rc}{\delta} + \left(\frac{1}{w_2}\right)^{\alpha/1-\alpha}\right] - 1}{t_1} + 1.$$

Or:

$$0 < w_1^{\alpha/1-\alpha} \times \left[\frac{refc_1 \times \alpha}{1-\alpha} \times \left(\frac{1}{w_2}\right)^{1/1-\alpha} - \frac{rc}{\delta} + \left(\frac{1}{w_2}\right)^{\alpha/1-\alpha}\right] - 1,$$

$$w_1^{-\left(\alpha/1-\alpha\right)} < \frac{refc_1 \times \alpha}{1-\alpha} \times \left(\frac{1}{w_2}\right)^{1/1-\alpha} + \left(\frac{1}{w_2}\right)^{\alpha/1-\alpha} - \frac{rc}{\delta}.$$

Here too, we see the effects of wages outside and inside the R-SEZ, the cost of supporting refugees and relocation costs as playing a role. The tax rate outside the zone, however, does not matter for whether γ needs to be lower.

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